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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,626	07/30/2003	Gregory A. Demopulos	PH.1.0037.US2	9065

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EXAMINER	
ALSTRUM ACEVEDO, JAMES HENRY	

ART UNIT	PAPER NUMBER
1616	

DATE MAILED: 06/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/630,626	DEMOPULOS ET AL.	
	Examiner	Art Unit	
	James H. Alstrum-Acevedo	1616	

-- The MAILING DATE of this communication appears on the cov r sheet with th c rrespond nce address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 March 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) *4-5, 9, 17-18, 20,22, 24-25, and 27* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,6-8,10-16,19,21,23,26 and 28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4/27/06; 11/8/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-28 are pending. Claims 1-3, 6-8, 10-16, 19, 21, 23, 26, and 28 are under consideration in the instant office action.

Election/Restrictions

Claims 29-54 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Claims 4-5, 9, 17-18, 20, 22, 24-25, and 27 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on March 31, 2006. It is noted that Applicant cancelled claims 29-54.

Specification

The incorporation of essential material in the specification by reference to an unpublished U.S. application, foreign application or patent, or to a publication is improper. Applicant is required to amend the disclosure to include the material incorporated by reference, if the material is relied upon to overcome any objection, rejection, or other requirement imposed by the Office. The amendment must be accompanied by a statement executed by the applicant, or a practitioner representing the applicant, stating that the material being inserted is the material previously incorporated by reference and that the amendment contains no new matter. 37 CFR 1.57(f).

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 12-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Cagle et al. (WO 95/16435; IDS).

Applicant recites a method perioperatively inhibiting inflammation, inhibiting pain, effecting mydriasis, and/or decreasing intraocular pressure during an ophthalmologic procedure comprising continuously irrigating ocular tissues during said procedure with a solution including at least first and second agents in a liquid irrigation carrier, wherein first agent is selected from anti-inflammatory, analgesic, mydriatic, and intraocular pressure-reducing agents (IOP reducing agents) and the second agent has a different physiological function or functions than the first agent.

Cagle discloses in claim 13 an improved **method of irrigating ophthalmic tissue during intraocular surgical procedure**, which comprises applying to the affected ocular tissue a composition comprising: (a) a **non-steroidal antiinflammatory (NSAID) drug**, (b) a **free radical scavenger**, (c) **electrolytes**, (d) an **energy source**, (e) **bicarbonate**, (f) **buffer** in an amount to maintain the **pH of the composition in the range of 6.8 to 8.0**.

In claims 16, 18-19, and 20, Cagle discloses that the NSAID is selected from **suprofen, diclofenac, ketorolac, flurbiprofen** (claim 16), and ibuprofen; free radical

scavenger selected from ascorbate, glutathione, and cysteine (claim 18); **glutathione** is the free radical scavenger (claim 19); a method of claim 17, wherein the composition comprises **0.1 to 5 mM free radical**, **1-25 mM dextrose** (energy source), 1-200 mM NSAID, **50-500 mM sodium ions**, **1-10 mM potassium ions**, **0.1-5 mM calcium ions**, **50-500 mM chloride**, **10-50 mM bicarbonate** (buffer), **0.1-5 mM phosphate**, respectively.

Cagle's disclosed method inherently is continuously applied, because Cagle's method involves irrigation during intraocular procedures, which means throughout the duration of said procedure. Furthermore, it is noted that "irrigate" is medically defined in the 2002 *Pocket Oxford American Dictionary of Current English* (Oxford University Press: New York, 2002, pp 418) as:

"Supply (a wound, etc.) **with a *constant flow* of a liquid**."

The *Oxford American Dictionary of Current English* was used to explain the meaning of the term "irrigating," which is proper in a rejection under 35 U.S.C. 102(b), MPEP § 2131.01:

Normally, only one reference should be used in making a rejection under 35 U.S.C. 102. However, a 35 U.S.C. 102 rejection over multiple references has been held to be proper when the extra references are cited to:

(A) Prove the primary reference contains an "enabled disclosure;"
(B) Explain the meaning of a term used in the primary reference; or
(C) Show that a characteristic not disclosed in the reference is inherent.

Claims 1, 6, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Gan et al. (U.S. Patent No. 5,523,316; IDS).

Applicant's claims have been described above.

Gan recites:

21. An improved method of irrigating ophthalmic tissue and controlling intraocular pressure during intraocular surgical procedures which comprises applying to the affected ocular tissue a composition comprising:

an effective amount of a drug for controlling intraocular pressure selected from the group consisting of beta-blockers, alpha adrenergic agonists, muscarinic agonists, carbonic anhydrase inhibitors, angiostatic steroids, and prostaglandins;

an amount of an antioxidant/free radical scavenger effective to maintain normal function of corneal endothelial cells selected from the group consisting of beta carotene, asorbic acid, vitamin E, glutathione, and cysteine;

electrolytes comprising, Na^{+}, K^{+}, Ca^{++}, Mg^{++}, Cl^{-}, bicarbonate, and phosphate in an amount effective to maintain tissue stability;

an energy source in an amount effective to satisfy the metabolic requirements of corneal endothelial cells and other ophthalmic tissues during the surgical procedure;

said amount of bicarbonate further effective to maintain the fluid pump system of corneal endothelial cells and other ophthalmic tissues; and

22. A method according to claim 21, wherein the drug for controlling intraocular pressure is selected from the group consisting of beta-blockers and alpha adrenergic agonists.

23. A method according to claim 22, wherein the drug for controlling intraocular pressure comprises a beta-blocker.

24. A method according to claim 23, wherein the beta-blocker is selected from the group consisting of betaxolol, timolol and levobunolol.

25. A method according to claim 22, wherein the drug for controlling intraocular pressure comprises an alpha adrenergic agonist.

As described above, irrigate inherently means continuously.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Applicant Claims
2. Determining the scope and contents of the prior art.
3. Ascertaining the differences between the prior art and the claims at issue; and resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3, 6-8, 10-16, 19, 23, 26, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas (U.S. Patent No. 5,811,446).

Applicant Claims

Applicant recites a method perioperatively inhibiting inflammation, inhibiting pain, effecting mydriasis, and/or decreasing intraocular pressure during an ophthalmologic procedure comprising continuously irrigating ocular tissues during said procedure with a solution including at least first and second agents in a liquid irrigation carrier, wherein first agent is selected from anti-inflammatory, analgesic, mydriatic, and intraocular pressure-reducing agents (IOP reducing agents) and the second agent has a different physiological function or functions than the first agent.

Determination of the Scope and Content of the Prior Art (MPEP §2141.01)

Thomas teaches methods for protecting the eye from degenerative eye conditions by administering prophylactic histidine compositions, **methods for treating ocular inflammation** resulting from various causative agents, by administering therapeutic histidine compositions, and novel histidine compositions for carrying out the present methods (abstract).

Thomas teaches that ocular inflammation is the result of tissue damage, including microbial infections, immunologic conditions, and physical trauma (col. 1, lines 57-67). His method is designed to prevent ocular degenerations or treat ocular inflammation arising from surgical, chemical, or accidental physical traumas. His invention may also be used to enhance post-surgical wound healing of the eye and reduce the major drawbacks of certain refractive surgeries (col. 4, lines 30-37). In a preferred embodiment, histidine is administered before, **during**, and/or after interventional/corrective ophthalmic procedures **to limit the inflammatory** response that results from the incision of a cutting implement or laser (col. 5, lines 53-56). Histidine can be coadministered with at least one other therapeutic agent in the same delivery vehicle/carrier either topically, orally, or intravenously, including, for example, an antibiotic (e.g. ciproflaxin), a free-radical oxygen scavenger (e.g. **glutathione**), **an aqueous or saline irrigating solution**, a corticosteroid, a NSAID (e.g. **ketorolac, flurbiprofen, ketoprofen, diclofenac**, a mydriatic agent (e.g. **atropine**), an antiglaucoma agent (e.g. **phenylephrine and timolol maleate)**, and mixtures thereof (col. 7, lines 55-58, 65-67; col. 8, lines 1. 6. 14. 22. 24-29, and 37; claim 27-30). Suitable carriers for ophthalmic solutions or suspensions include **phosphate buffered saline, saline water, or 5% dextrose in water** (col. 8, lines

59-61). Thomas teaches that the histidine compositions have a **pH between about 7 and about 10** (col. 9, lines 1-3).

Thomas teaches that ophthalmic histidine solutions may contain one or more formulation additives, including buffers, such as carbonate salts, which are present from about 0.05 to about 10 % w/w (col. 9, lines 9-17). Although Thomas teaches several forms for his invented histidine compositions, these are preferably in the form of solutions (col. 10, lines 40-41). Thomas teaches several exemplified compositions, such as Example 3, comprising histidine hydrochloride, **sodium bicarbonate** (~7 mM), **potassium phosphate monobasic (30 mg), sodium phosphate dibasic** (75 mg), distilled water, etc. Example 2 teaches a composition in which histidine is combined with another therapeutic agent (ciprofloxacin, an antibiotic). Claims 1-4, 5-23, 24-30, and dependent claims thereof in Thomas' patent recite methods of (a) methods of protecting a mammal from degenerative eye condition; (b) treating ocular inflammation; and (c) enhancing wound healing following a corneal excimer laser procedure, respectively. It is also noted that histidine is obviously a NSAID, because as taught by Thomas it is an anti-inflammatory drug.

Ascertainment of the Difference Between Scope the Prior Art and the Claims (MPEP §2141.012)

Thomas lacks the teaching of continuously irrigating ocular tissues and an exemplary method utilizing a composition comprising a NSAID or a steroid, timolol, and phenylephrine.

Finding of Prima Facie Obviousness Rational and Motivation

(MPEP §2142-2143)

It would have been obvious to a person of ordinary skill in the art at the time of the instant invention that Thomas teaches a method that is obvious over the methods of the claims included in the instant rejection. Although Thomas does not teach, "continuously irrigating ocular tissues," it would have been obvious to a skilled artisan when continuous irrigation is required during an ophthalmologic procedure and the frequency of irrigation would have been a parameter that a person of ordinary skill would have optimized. The frequency or duration of a given step in a method is clearly a result specific parameter that a person of ordinary skill in the art would routinely optimize. Optimization of parameters is a routine practice that would be obvious for a person of ordinary skill in the art to employ. It would have been customary for an artisan of ordinary skill to determine the optimal frequency and duration needed to achieve the desired results. A person of ordinary skill in the art at the time of the instant invention would have been motivated to modify the frequency and duration of irrigation utilizing Thomas' invented composition, because optimization of the frequency and duration of steps is routinely practiced in the art. Thus, absent some demonstration of unexpected results from the claimed parameters, the optimization of the frequency and duration of ocular tissue irrigation during an ophthalmological procedure would have been obvious at the time of applicant's invention.

Likewise, the amount of a specific ingredient in a composition is clearly a result effective parameter that a person of ordinary skill in the art would routinely optimize. Optimization of parameters is a routine practice that would be obvious for a person of ordinary skill in the art to employ. It would have been customary for an artisan of

ordinary skill to determine the optimal amount of each ingredient needed to achieve the desired results. Thus, absent some demonstration of unexpected results from the claimed parameters, the optimization of ingredient amounts would have been obvious at the time of applicant's invention.

Regarding the combination of an anti-inflammatory (either a NSAID or a steroid) with timolol and phenylephrine, although this is not taught in an example, it is taught in Thomas' claims, wherein Thomas' claim 27 recites, " the method of claim 5 (i.e. treating ocular inflammation) further comprising co-administering a therapeutically effective amount of histidine (an NSAID) ***in combination with a therapeutically effective amount of at least one of*** an antibiotic, an antibacterial agent, an antioxidant, an antiviral agent, a corticosteroid, an hydroxyacid, a ketoacid, a non-steroidal antiinflammatory agent, a cycloplegic, a miotic, a collagenase inhibitor, an anti-glaucoma agent, a carbonic anhydrase inhibitor, a glycoprotein, and silver nitrate." Specifically recited drugs belonging to these general classes of pharmaceutical agents are recited in Thomas' claim 28, including glutathione (antioxidant (i.e. free-radical scavenger)), betamethasone (steroid), ketorolac (NSAID), phenylephrine (anti-glaucoma agent), and timolol (anti-glaucoma agent). Therefore, the Examiner concludes that claims 1-3, 6-8, 10-16, 19, 23, 26, and 28 of the instant application are *prima facie* obvious over the teachings of Thomas.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent

and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1 and 28 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over (USPN '715) claims 1-4 of U.S. Patent No. 6,056,715 (USPN '715), claims 1-3 of U.S. Patent No. 5,820,583 (USPN '583), claims 1-3 of U.S. Patent No. 6,210,394 (USPN '394), all in view of Thomas et al. (U.S. Patent No. 5,811,446). Although the conflicting claims are not identical, they are not patentably distinct from each other because these are overlapping in scope and mutually obvious. Claims 1-4 of USPN '715 generically recite a method of preemptively inhibiting pain and inflammation at a wound during a surgical procedure comprising the delivery of a solution, perioperatively (claim 2) and continuously (claim 3), wherein the solution comprises 0.1-2000 nM of a serotonin receptor agonist (presumably an analgesic drug). It is noted that the application of a solution continuously reads on "continuous irrigation" as recited in claims 1 and 28 of the instant application. Furthermore, many ophthalmologic procedures are surgical, such as cataract surgery, and therefore are

encompassed by claim 1 of USPN '715. The primary difference between the claims of the instant application and those of USPN '715 is that USPN '715 does not recite a second therapeutic agent. This deficiency is cured by the teachings of Thomas, set forth above, in which histidine (a NSAID) can be coadministered during an ophthalmologic procedure with other therapeutics, including antioxidants, mydriatic agents, etc. Therefore, Thomas implicitly teaches the desirability of including two or more therapeutic agents in an irrigation solution. Similar reasoning and analysis is applied to the rejection over claims 1-3 of USPN '394 and claims 1-3 of USPN '583. Regarding the amount of reagents in a solution utilized in a method, the amount of a specific ingredient in a composition is clearly a result effective parameter that a person of ordinary skill in the art would routinely optimize. Optimization of parameters is a routine practice that would be obvious for a person of ordinary skill in the art to employ. It would have been customary for an artisan of ordinary skill to determine the optimal amount of each ingredient needed to achieve the desired results. Thus, absent some demonstration of unexpected results from the claimed parameters, the optimization of ingredient amounts would have been obvious at the time of applicant's invention.

Claims 1 and 28 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-12 and 18 of U.S. Patent No. 6,261,279 (USPN '279); claims 1-10 and 22 of U.S. Patent No. 6,413,961 (USPN '961); and claims 1-11, 18-22, and 29-30 of U.S. Patent No. 6,420,432 (USPN '432). Although the conflicting claims are not identical, they are not patentably distinct from each other because they are overlapping in scope and thus mutually obvious. Claims 1-

12 and 18 of USPN '279 generically recite a method of preemptively inhibiting pain and inflammation at a wound during a surgical procedure comprising the delivery of a solution, perioperatively (claims 6-7), continuously (claims 2-4 and 8), locally applied to the wound (claim 5), wherein the solution comprises a plurality of pain/inflammation inhibitory agents in a liquid carrier at a concentration no greater than 10,000 nM (claim 10) of 100,000 nM (claim 18). It is noted that the application of a solution continuously reads on "continuous irrigation" as recited in claims 1 and 28 of the instant application. Furthermore, many ophthalmologic procedures are surgical, such as cataract surgery, and therefore are encompassed by claim 1 of USPN '279. Similar reasoning and analysis is applied to the rejection over claims 1-10 and 22 of USPN '961 and claims 1-11, 18-22, and 29-30 of USPN '432. USPN '432 also recites "solutions for use in preemptive inhibition of pain and inflammation at a wound during a surgical procedure", which are the same as those utilized in the method claims of USPN '432. Therefore, these are also obvious over method claims of the instant application.

Claims 1 and 28 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,254,585 (USPN '585). Although the conflicting claims are not identical, they are not patentably distinct from each other because they are overlapping in scope and thus mutually obvious. Claim 1 of USPN '585 generically recites a method of preemptively inhibiting pain and inflammation at a wound during a surgical procedure comprising the delivery of a solution perioperatively and locally applied to the wound, wherein the solution comprises a plurality of pain/inflammation inhibitory agents in a liquid carrier at a

concentration no greater than 100,000 nM of a tachykinin receptor antagonist. It is noted that the application of a solution reads on "irrigation" as recited in claims 1 and 28 of the instant application. Although claim 1 of UPSN '585 does not recite "continuous" irrigation this would have been obvious to a skilled artisan who would have been capable of ascertaining (i.e. modifying) when it would be necessary and appropriate to apply said solution continuously to a wound during a surgical procedure. It is also noted that many ophthalmologic procedures are surgical, such as cataract surgery, and therefore are encompassed by claim 1 of USPN '585.

Other Matter

The IDS forms submitted with the instant application are not on the proper form (PTO-1449). Nonetheless, the references cited therein were considered as indicated.

Conclusion

Claims 1-3, 6-8, 10-16, 19, 21, 23, 26, and 28 are rejected. No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James H. Alstrum-Acevedo whose telephone number is (571) 272-5548. The examiner can normally be reached on M-F, 9:00-6:30, with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on (571) 272-0664. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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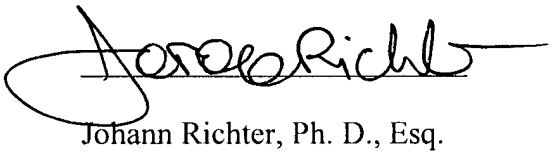

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